FIG. 1

HUMAN PLATELET
TS PST ACTIVITY VS. THERMAL STABILITY

(A)

TS PST THERMAL STABILITY (H/C RATIO)

N = 905

TS PST ACTIVITY
(U/10^8 PLATELETS)

(B) Genotype-Phenotype Correlation

TS PST THERMAL STABILITY (H/C RATIO)

SULT1A1
□ *2/*2
◩ *1/*2
■ *1/*1

TS PST ACTIVITY
(U/10^8 PLATELETS)
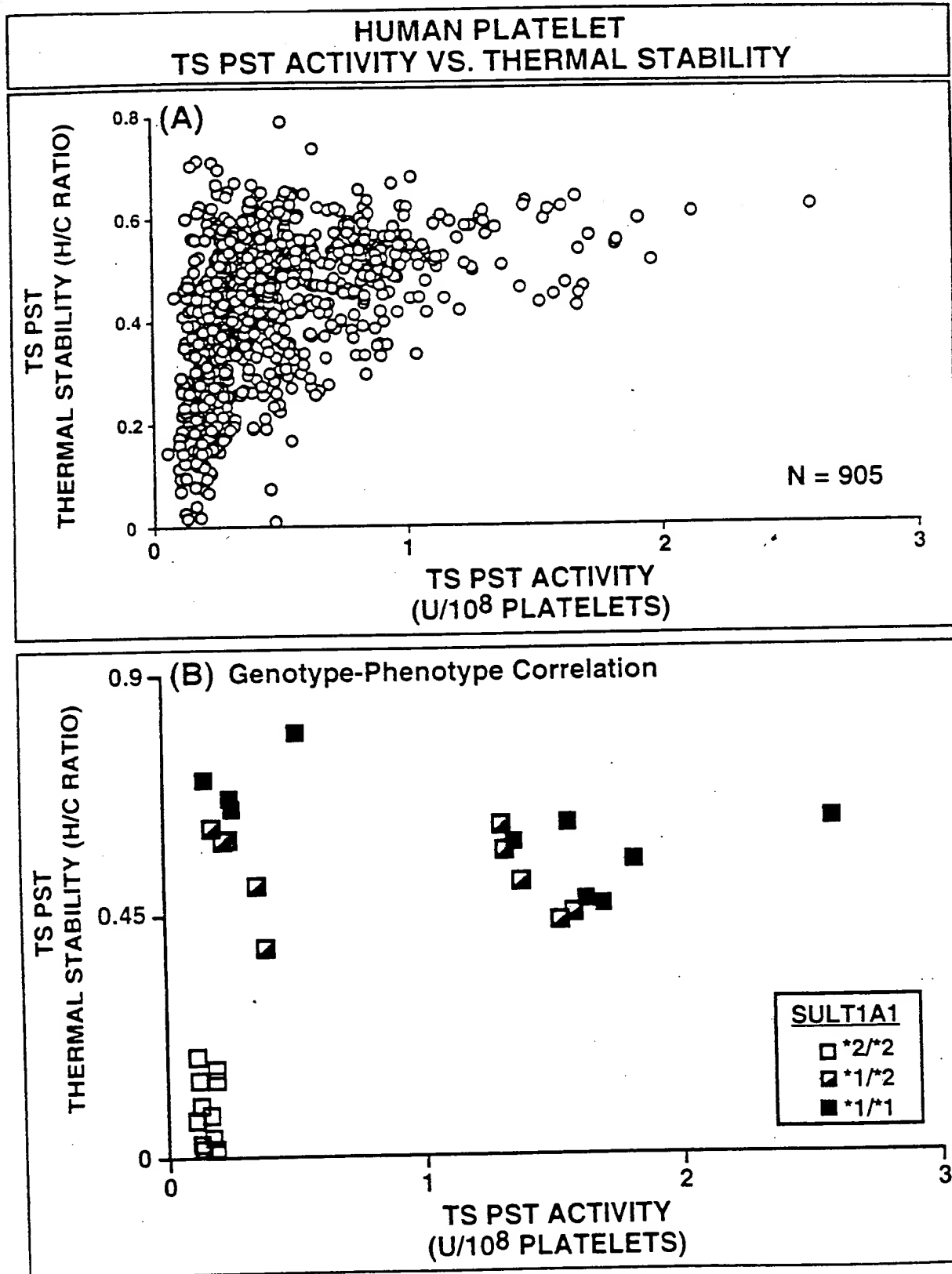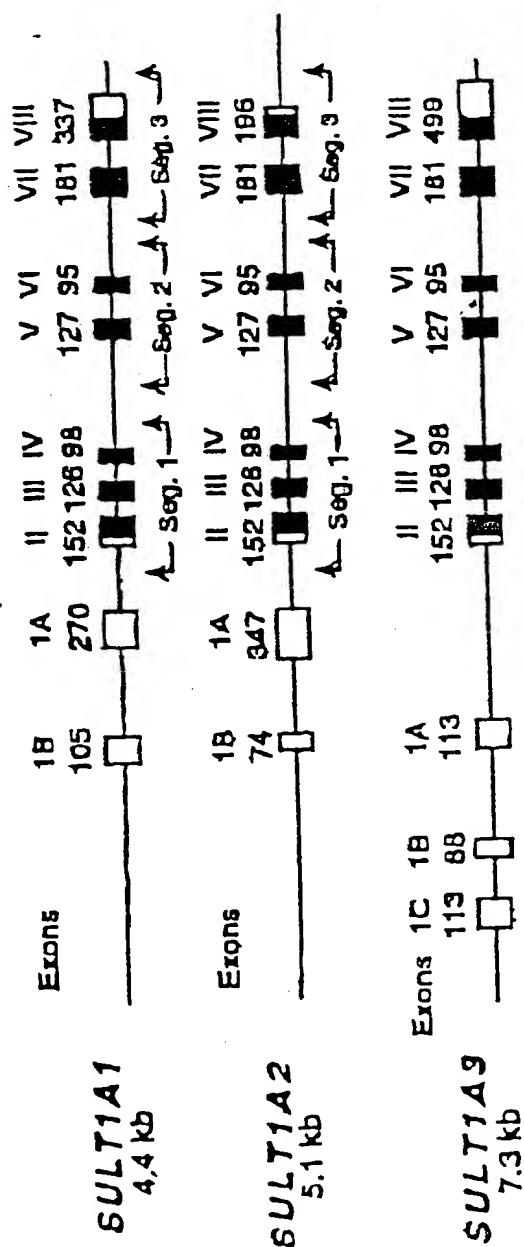
FIG. 2

HUMAN SULT1A (PST) GENE STRUCTURES

FIG. 3

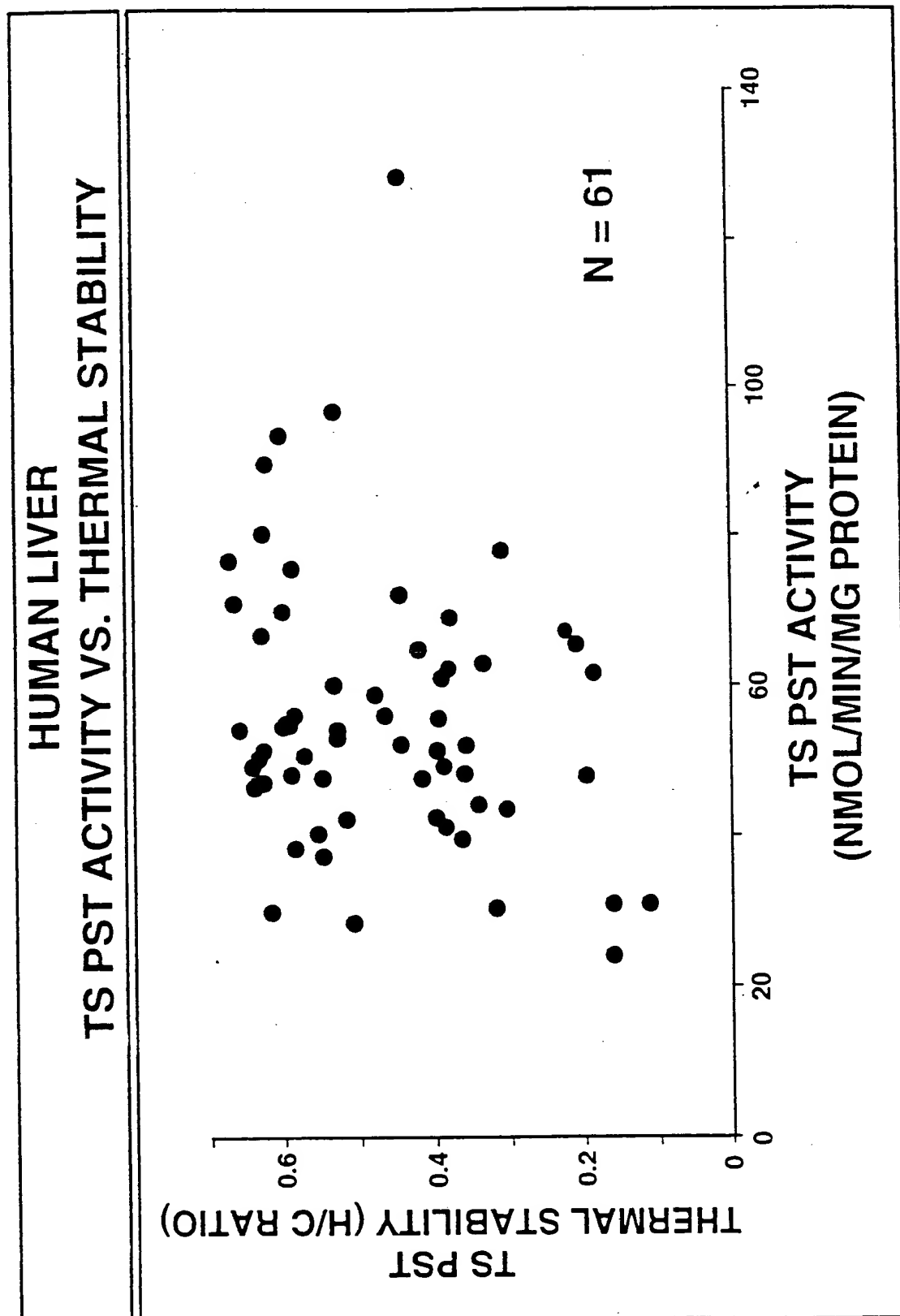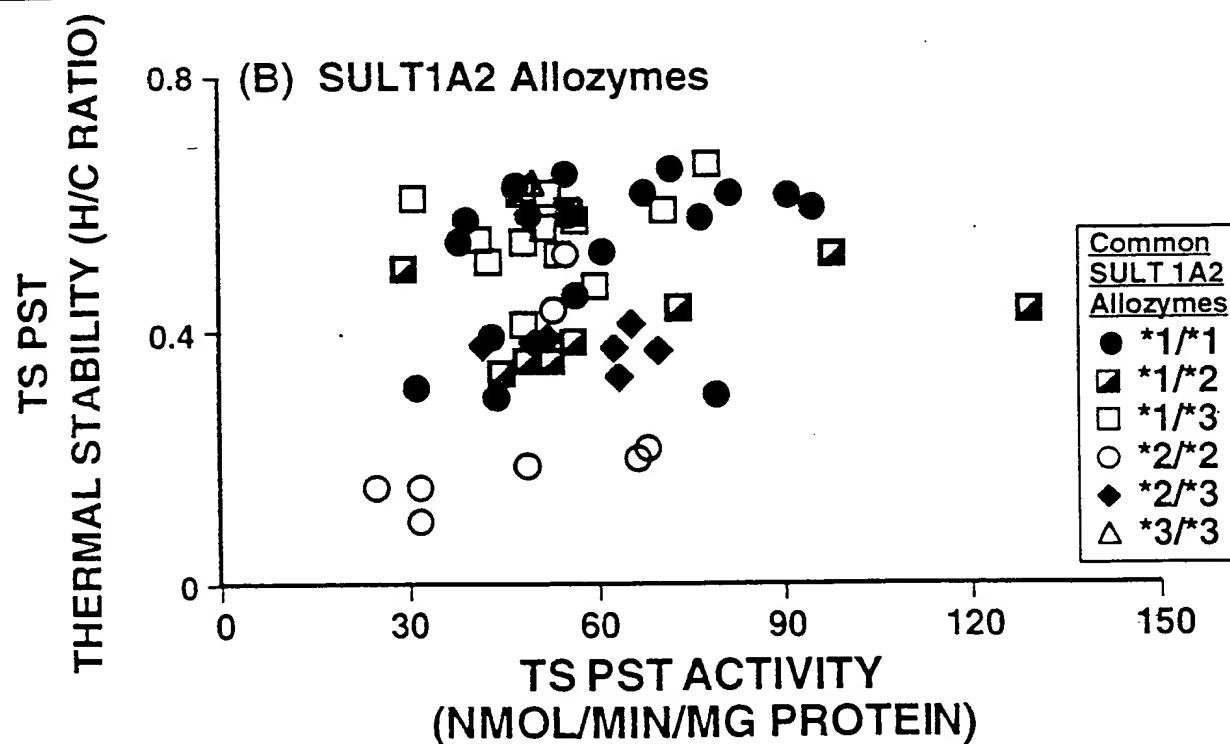HUMAN LIVER
TS PST ACTIVITY VS. THERMAL STABILITY

N = 61

TS PST ACTIVITY
(NMOL/MIN/MG PROTEIN)

TS PST
THERMAL STABILITY (H/C RATIO)

FIG. 4

HUMAN LIVER
TS PST GENOTYPE-PHENOTYPE CORRELATION

(A) SULT1A1 Allozymes

TS PST THERMAL STABILITY (H/C RATIO)

TS PST ACTIVITY (NMOL/MIN/MG PROTEIN)

Common SULT 1A1 Allozymes
- ● *1/*1
- ▨ *1/*2
- ☐ *1/*3
- ○ *2/*2

(B) SULT1A2 Allozymes

TS PST THERMAL STABILITY (H/C RATIO)

TS PST ACTIVITY (NMOL/MIN/MG PROTEIN)

Common SULT 1A2 Allozymes
- ● *1/*1
- ▨ *1/*2
- ☐ *1/*3
- ○ *2/*2
- ◆ *2/*3
- △ *3/*3

FIG. 5

HUMAN *SULT1A1* GENE SEQUENCE

EXON IB

EXON IA

EXON II

M E L I Q D T S R P P L E Y V K G V P L I K Y F A E A L G P L

Q S P Q A R P D D L L I S T Y P K S G

EXON III

T T W V S Q I L D M I Y Q

EXON IV

G G D L E K C M R A P I F M R V P F L P K A R G W K P S G

M E T L K D T P

A P R L L K T H L P L A L L K P Q T L L D Q R V K

EXON V

V V Y V A R

M A K D V A V Y Y Y H N A K V H P E P G T W D S F L E K F M

V G S V

EXON VI

S Y G S W Y Q H V Q E W W E L S R T H P V L Y L P Y E D M K E

EXON VII

N P K R E I Q K I L E F V G H S L P E E T V D F M

V Q H T S F K E M K K N P M T N V T T V P Q E F M D H S I S P F M R

K G

EXON VIII

M A G D W K T T F T V A Q N E R F D A D Y A E K

M A G C S L S F R S E L

Figure 1. *SULT1A1* gene sequence. Exon sequence is shown in uppercase, while intron, 5'-flanking region and 3'-flanking region sequence is in lowercase. The 'ATG' translation initiation codon and the 'TGA' translation termination codon are underlined. Amino acid sequence encoded by the gene is listed in single-letter code beneath the nucleotide sequence.

FIG. 6

HUMAN *SULT1A2* GENE SEQUENCE

EXON IB

EXON IA

EXON II

EXON III

EXON IV

EXON V

EXON VI

Figure 2. *SULT1A2* gene sequence. Exon sequence is shown in uppercase, while intron, 5'-flanking region and 3'-flanking region sequence is in lowercase. Amino acid sequence encoded by the gene is listed in single-letter code beneath the nucleotide sequence.

FIG. 7

```
   1 acctctgcct cctggttcca agcaatcctc cttcctcacc ctccagagta gctgggatta
  61 cacgcgcctg ccaccgcgcc tggcctaatt tttgtatttt tagtagagat ggggtttcc
 121 aaccatgttg gccaggctgg tctccaaact cctgacctca ggtgatcctg cccacctaag
 181 cctcccaaaa tgctggtatt acaggcatga gccaccgtgc ccggcctaaa taattaataa
 241 aataatggac gatgggtgcc ttctactgag ctcccggtaa ttgtgagtga gtagaggact
 301 tgccctgggg acattcagtg acctgctggg tgttgctgag ctgtgaggaa gttcaggtct
 361 ggctgcagtg gtgaggctgt gactcaatca atcactgctg atgctcccag gacctgcacc
 421 agcttagtcc taggggcaag gattttaact gtccacctca gtttcttcat ttgtaagatg
 481 caaataacag tcacccctgc ctcatgggat ggagctgtgt aatgcccgca acagtgcctg
 541 ctgcatagag gggttgctgc cagctgcctc tccctccttg tctcttacct gcctgctgcc
 601 tggctcacga tgaagaccg cccttgtgtt gccccaccc tggctgcctg ctaagggccc
 661 atgtgatctg cctggcagag gagtttcttc aggaagaacc agggcagctt ctgcccctag
 721 agggccaatg cccttggtga gtgcagtccc ctggccccag cctggtccac ctctgggaag
 781 agggtgccca gttgtgcaat ccaggcccag gcagctgagc cctcatctca gcatgcaggg
 841 cggatactgg aggggcttg tggcatctga ctctgtatct cctacctgcc cctctccttg
 901 gtagctgtga gaagtcactg ctttggggag acctgatctg gctgtgccag atggacactg
 961 agaaagaagt agaagactca gaattagaaa aggtgagtgg gctttggtgg cgggctccct
1021 accccactcc ctgccctggg ctgcctgtga ccacactgct tgcctctgca ggcacactgg
1081 acagacctgc tggagacctg atcctcagtg tccttacccc ctcctacctc tttttctgtgc
1141 cacctgctgt gggtccagca ggttttttact tgagtacaat aaaaagtctg agtcaagggt
1201 gccttatggt ggatgctgag ggggaggggcg gagctagtag cccaaggtcc tgccagtcac
1261 ggggcttcct caggggcaca gaggaggcag gaggggcccc tggccctagc acgtgaacag
1321 cttctactct gcctggaaac cccatgcctc agctttcccc tacttgcctc tgagctcatg
1381 caattcttgg aagcctggga gacttacctt gaaattgaat gcaaatagga caaagaccaa
1441 ggaggatggg gggatgccct ccttccacgg ggccctgtgg cttccaagtc ttaatctcct
1501 ctagtctctt gtctacggag cctccttcaa acccagggaa agaaaagcac ctgccagggt
1561 tgttttttctt ctaggatctt ctattgatgc tctgtgaggt cccccaggag ccatgaagct
1621 agggctggct cctagggcaa tgggactaca gtgtccttgt cctttcttat tctttctgtt
1681 ctttcttct ttcttttttt ttttttttt ttttttgag acagagtctc actctgttgc
1741 ccaggctgga gtgcagtggt gtgatcttgg ctcactgaaa cctccgcctc ctgggttcaa
1801 gtgattctct tgcctcagcc tcctgagtag ctaggattac aggtgcccgc catcatgccc
1861 agctaatttt tgtatttttа gtagagacag ggtttcacca tgttggccag cttggtctcg
1921 aactcctgac ctcaggtgat cctgctgcat cgacctccca aagtactggg attacaggcg
1981 tgagccacca cgctcagcct ctttcttgtt ctatatgtcc atgctctgct ccacttctgc
2041 cccttcactc tgccccacac atcactccag actggccttg tggtcagagc ctggaatgcc
2101 tgggctgctg ggggcctgtg gactgcactg ggccagaacc cctgccgcct tcaagactgg
2161 cctgtagcca gcaggtaggt gacttttccc aggccggcct atcccacctt tcccctccac
2221 tcactcacct cccttgcctg ggtcaattag agaaagcttg tcggccaggc atggtggctc
2281 atgcctgtaa tctcagcact ttgggaggcc gaggcgggcg gatcatctga gctcaggagt
2341 ttgagaccag cctggccaac atggcaaaac cccgtctcta ctaaaaatac aaaaattaac
2401 cggatgtggt ggtgtgcacc tgtaatccca gctactcggg aggctgaggc agaagaatcg
2461 cttgaaccca ggaggggag gttacagtga gcggagatcg tgctactgca ttgcagcctg
2521 ggcgagagag cgagtctcca tctcacataa aaaaagaaa aagaagaaa gcaagcttgt
2581 ctgttggcct gccctgcagg gtggagttca gagggaaggt caggagccta gtgacagctc
2641 aaaaaaaaaa aaacccaaat accaatgttg gccccttttg cctttcattc atgtgttttc
2701 tatacactaa actcacatat tgggtttgca gatcactcca agcttggctg gagctgtggt
2761 ggtaaggagg gtaatagaga agcttccca ccctcaaccc cacccttcc ttcctggagt
2821 tcccagccct gactttagat ccctccgaca ctggaccttc aaaaccctca gggcagagag
2881 cagccctaca ctccctacac cacacccata ctcagcccct gcaggcaagg agagaacagg
2941 tcaggttccc gagagctcag gtgagtgaca cgttggaatg gcccagggca ccttcaccct
3001 gctcagcttg tggctccaac attctagaag ccgaggcctc tgccatccct gccctttccc
3061 atggatattc catttcaatt agacaaccca gcctggccgg aatccccctg cgttccttct
3121 tttcctttgt gtattttga gacagggtgt tgctccgtca cccaggctgg agtgtagtgg
3181 gatcctggcc cactgcagcc tcaaattcct aggctgaggc aatcctgccg cctcagcctc
```

FIG. 7 CONT.

```
3241 ctgagtagct ggggttacaa gagcaagcca ccacacccag ctaattttga aaaatatttt
3301 ttgtagagga gaggtcttgc tttgttgtcc aggttggtct caaactccag ggctcaaggg
3361 atcctttccc gttggcctcc caaggctctg ggattacagg cgggagtcac cctgcctggg
3421 cccctccttt tgatgagtca tcagttttca ttcccgcacg aggctctagc ccctggtacc
3481 agcttagttg ctcaatgggc tgtgtttgtt ctggagccca gatggactgt ggccaggcaa
3541 gtggatcaca gacctggccg gcctgggagg tttccacatg tgaggggcat gagggggggct
3601 caaggagggg agcatcgggg agaggagcgc actgggtgga ggctgggggt cccagcagga
3661 aatggtgaga caaagggcgc tggctggcag ggagacagca caggcaggcc ctagagcttc
3721 ctcagcacag ctggactctc ctggagacct tcacacaccc tgatatctgg gccccgcgct
3781 acgagggtgc tttcactggt ctgcactatg ccccaggccc tgggattttg aacagctctg
3841 caggtgactg aaaggtgcgg ccaggctggg gaacgacctg gtttcagccc cagccccgcc
3901 actgactgac tttgtgagtg cgggcaagtc actcagcctc cctaggcctc agtgacttcc
3961 ctgaaagcaa aaactctgca aaggggcagc tgggtgctgg ctcacacctg taatcccagc
4021 actttgggag gctgaggtag acaaatcact tgaggccagg agttctagac cagcctggcc
4081 aacatggtga aaccccatct ctactaaaga aaaaaaaaaa ttagctgagc atggttgtac
4141 atgcttgtaa tcccagctac ttgggatgcc gaggcgggag gattgcttga acccaagagg
4201 tggagtttgc agtgagctga gattgtgcca cactgcactc cagcttgggt gagagtgaga
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4321 gtaagggaac gggcctggct ctggcccctg atgcacgaac atggagctga tccaggacac
4381 ctcccgcccg ccactggagt acgtgaaggg ggtcccgctc atcaagtact ttgcagaggc
4441 actgggccc ctgcagagct tccaagcccg acctgatgac ctgctcatca acacctaccc
4501 caagtctggt aagtgaggag ggccacccac cctctcccag gcggcagtcc ccaccttggt
4561 cagcaaggtc gtgccctcag cctgctcacc tcctatctcc ctccctctcc aggcaccacc
4621 tgggtgagcc agatactgga catgatctac cagggcggcg acctagagaa gtgtaaccgg
4681 gctcccatct acgtacgggt gcccttcctt gaggtcaatg atccagggga accctcaggt
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4801 ccagaccttc cctgacccac tactcaggc tggagactct gaaagacaca ccgcccccac
4861 ggctcatcaa gtcacacctg cccctggctc tgctccctca gactctgttg gatcagaagg
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5761 ggtacctgcc accacgcccg gctaattttg tatttttagt agagatgggg tttcaccatg
5821 ttggtcaggc tggtcttgaa ctcctgacct caggtgatct ggcaccttgg cctcccaaag
5881 tgccgggatt agaggcatga gccaccacgc ccagccttca tcacatcttg agagaggaca
5941 ctgtctgcct cttgctctga tgagggtctg atgcaaagga tagtgagtct ctacagtgca
6001 cacttaagaa aggcagcatg tgggtgctca caggtcaggc ggaggagggg gagctggtgg
6061 ggaccaggca tgccttgctc cagatcagga tatgatggca ttggtgcaga ttatattagt
6121 atagaatatg gtctcaggaa ccaggcagga ctttggcttc cgagcagggt tcagatccca
6181 gcttggccct acctgtgcag tgagatctca agcaagtcag cctctaagcc tcaggttcct
6241 cctttgccag ttcaacagat gagctggcct ggggtgggct gtgtggtgat ggtgctgggg
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6361 tcctactacc atttccaccg tatggaaaag gcgcaccctg agcctgggac ctgggacagc
6421 ttcctggaaa agttcatggc tggagaagt gggcttgact ggaggaagga gggtgtgaag
6481 ccgaggggtg gtggctataa cgtacagcaa ccctgtgtcg gtgccccctg cccgcttctc
6541 tagtgtccta cgggtcctgg taccagcacg tgcaggagtg gtgggagctg agccgcaccc
6601 accctgttct ctacctcttc tatgaagaca tgaaggaggt gagaccgact gtgatgcttc
```

FIG. 7 CONT.

```
6661 cccccatgtg acacctgggg gcaggcacct cacagggacc caccaaggcc acccagcccc
6721 gtccctgggc ggctcccaca gcaagcccgg attccccatc ctacctccct ggcccaggcc
6781 cccccactgc agccccacct ggcagcaggc tcggcacagc tttcatcttc tgcacctgag
6841 tcagctgcat gggtggccac ggatcagata cttagtccta ttgcttatcc tcaccaaagg
6901 gtgtgccacc cagggccaca gtcatggaag aagaccatcc cggtcctcac ccataggcgc
6961 caagccctgt tcatgatggg atcacagggc agagatcaat tcattttact cca_agacta
7021 gggccccagg ggttgaggct ctttgggggtt tctaggggaa gtggccagat cccctctgag
7081 gttagagagg gggacccgtt ttgtttttgct ccactgagga gccctctgct gctcagaacc
7141 ccaaaaggga gattcaaaag atcctggagt ttgtggggcg ctccctgcca gaggagacca
7201 tggacttcat ggttcagcac acgtcgttca aggagatgaa gaagaaccct atgaccaact
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7681 gagctggtag gatcacaata ggccacgaat ttgagaccag cctggtaaaa tagtgagacc
7741 tcatctctac aaagatgtaa aaaaattagc cacatgtgct ggcacttacc tgtagtccca
7801 gctacttggg aagcagaggc tggaggatca tttcagccca ggaggttgtg gatacagtga
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```